recommendations begin now but retain the flexibility of allowing natural development, especially of ties with the county medical societies. There are also points of reevaluation that may be seen as providing further flexibility.

The importance of these recommendations goes far beyond California. They will serve as a model in other parts of the country. The February 1973 AMA National Leadership Conference used the California recommendations as a basic model in its seminars on housestaff membership. Thus, the CMA becomes a pacesetter.

Through the recommendations, two large groups of physicians can be brought together under one roof. As the relationship grows, it can be expected that the two not-too-disparate groups will see how similar are many of our problems and goals. The result should be a strong, democratic and unified profession which can best meet future problems in health care.

EUGENE S. OGROD, II, MD
Sacramento

Illicit Intravenous Drug Use and Bacterial Endocarditis

INFECTIOUS DISEASES of many kinds are common among the consequences of illicit intravenous administration of drugs, especially narcotics. Infective endocarditis is clearly one of the most serious of such infectious complications. There is an added significance in that infective endocarditis has never been a common disease. Indeed, it might be expected to decline in frequency with time. As acute rheumatic fever becomes a rarity, the residuum of rheumatic heart disease should also diminish and the population of vulnerables should become smaller. Among remaining antecedents, however, it now appears that illicit intravenous drug use is of increasing importance.

The report of Rosenblatt and co-workers in this issue of CALIFORNIA MEDICINE supports reports by other observers in affirming there is a higher proportion of addicts among patients recently admitted to hospital with infective endocarditis. An additional ominous change is also documented, namely, an increased incidence of endocardial infection caused by enteric, Gram-negative bacilli. At least two aspects of this development merit additional comment.

First, there is the poor outcome with antimicrobial drug therapy. The use of standard drugs, new agents, and novel combinations of antimicrobics has resulted, at best, in suppression of the infection. Cures are rare. At present, surgical debridement under cover of suppressive antimicrobial therapy appears to be the most useful approach.

Second, there is the enigma of pathogenesis. Despite the common occurrence of enteric, Gram-negative bacilli as causes of bacteremias, endocardial localization is distinctly uncommon—quite unlike the situation with Gram-positive cocci. It has been suggested that differences in the humoral immune response are of importance.[1] The enteric, Gram-negative bacilli typically activate a complement-mediated, bacteriolytic system, whereas the Gram-positive cocci stimulate agglutinins/opsonins without the involvement of complement. However, in the case of Pseudomonas and Serratia, bacteriolysis does not appear to result with humoral immunity. Moreover, abnormally high concentrations of immunoglobulins and serologic reactivity with an array of antigens (apparently unrelated to the disease or immunization history of the patient) are characteristic of serums from narcotic addicts.[2] Possibly, these immunoglobulins serve to facilitate endocardial localization of enteric, Gram-negative bacilli that are injected intravenously along with illicit drugs. Valvular damage, as attested by earlier episodes of bacterial endocarditis, was certainly of pathogenetic significance in two of the three patients reported by Rosenblatt et al.

Although bacterial endocarditis, as contrasted with other kinds of infective endocarditis, is usually curable through the proper use of antimicrobics, the challenge of devising and applying effective therapy is multiplied in addicts. So also is understanding the possible pathogenetic significance of hyperimmunoglobulinemia.

PAUL D. HOEPRICH, MD
Professor of Medicine and Pathology
Section of Infectious and Immunologic Diseases
Department of Internal Medicine
University of California, Davis
School of Medicine

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